



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/029,903

12/21/2001

Motoki Kato

SONYAK 3.9-157 CIP

5119

530 7590 07/19/2010
LERNER, DAVID, LITTENBERG,
KRUMHOLZ & MENTLIK
600 SOUTH AVENUE WEST
WESTFIELD, NJ 07090

EXAMINER

DANG, HUNG Q

ART UNIT

PAPER NUMBER

2621

MAIL DATE

DELIVERY MODE

07/19/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 04/29/2009 have been fully considered but they are not persuasive.

On page 14-15, Applicant argues that none of the cited references discloses the limitation of "said playlist is a file designating a playback sequence for a plurality of AV streams through a plurality of corresponding play items, each of said AV streams corresponding to respective clip information containing information ancillary to said AV stream, and said plurality of play items managing playback of said plurality of AV streams using time information, wherein said time information is used to determine corresponding AV stream address information by referencing said clip information."

In response, Examiner respectfully disagrees. At least in paragraphs [0057]-[0064], Sakai discloses the editing list corresponding to the recited playlist, in which it specifies or designates how to play back for previewing of the cuts and transitional materials sequentially – referring to Fig. 4G, such an editing list specifies the cuts a, X1, b, X2, and d sequentially. In such an example, the first play item comprises the information in the editing list that specifies the cut a to be played first. The second play item is interpreted as the information in the editing list that comprises at least two other pieces of information, one of which specifies to X1 to be played back next to the cut a and the other of which specifies the cut b to be played after the transitional material X1 has been played back. Such a second play item therefore includes a reference to the clip information for the Bridge Clip AV stream, i.e. specifying playback of X1, and a

reference to the clip information for said second AV stream, i.e. specifying playback of the cut b itself. The clip information is the information in the editing list that specifies what type of streams a specific cut is ("fade-in", "fade-out", "wipe" vs. unmodified cuts) and/or where the cuts begin and end using time information to determine corresponding AV stream address information in terms of in-points and out-points ([0060]; [0062]).

Therefore, Applicant's arguments are not persuasive.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 7-8, 10-12, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakai et al. (JP 11-146330 - references herein are made to Sakai et al. - US 2003/0012550, as an English translation).

Claim 1 recites an information processing apparatus, comprising (1) a generator operable to generate a Bridge Clip AV stream from a first AV stream and a second AV stream to consist of portions of each of those streams without changes to the portions; and to generate clip information that includes address information as information pertinent to said Bridge Clip AV stream and a clip stream type information for the Bridge Clip AV stream; (2) a recorder to record the generated Bridge Clip AV stream and clip

information; wherein said Bridge Clip AV stream maintains continuity to achieve a seamless playback and said clip stream type information included in the clip information for said Bridge Clip AV stream indicates that said third AV stream is a Bridge Clip AV stream, said Bridge Clip AV stream including enough data to enable continuous playback from a record medium during a time when a playback head jumps from one location on the record medium to another location on the record medium, said first AV stream is associated with a first play item and said second AV stream is associated with a second play item, said first and second play items are part of a playlist, and said second play item includes a reference to said clip information for said Bridge Clip AV stream and a reference to a clip information for said second AV stream, said playlist is a file designating a playback sequence for a plurality of AV streams through a plurality of corresponding play items, each of said AV streams corresponding to respective clip information containing information ancillary to said AV stream, and said plurality of play items managing playback of said plurality of AV streams using time information, wherein said time information is used to determine corresponding AV stream address information by referencing said clip information.

Sakai et al. anticipate an video editing/recording apparatus, comprising (1) a generator operable to generate a combined AV stream, which is a Bridge Clip AV stream, from the first AV stream and second AV stream for only a transition period [0011] using preset portions of the inputted streams (*Fig. 4A-4G*) without changes to the portions ([0097]; [0103]; [0105]) and an editing list ([0071]), which has information to specify the corresponding cuts and transition material ([0057]-[0064]), which is the clip

information, including editing points (in-points and out-points) to mark the cuts ([0086]), which are the address information to the first and second AV streams ([0098]). The editing list also includes "transition mode" for each combined AV stream ([0067] - *wherein the "transition mode" is the "clip stream type information"*) (2) a recorder to record the generated Bridge Clip AV stream and the editing list ([0072]); wherein said Bridge Clip AV stream maintains continuity to achieve a seamless playback (Fig. 4F; Fig. 4G; *"Bridge Clip AV stream being X1 or X2 maintains continuity of playback of AV streams a, b, and d in Fig. 4G; thus achieve a seamless playback"*) and said clip stream type information included in the clip information for said Bridge Clip AV stream indicates that said third AV stream is a Bridge Clip AV stream (*the "transition mode" indicates type of Bridge Clip AV stream, e.g. "fade-in", "fade-out" Bridge Clip AV stream in [0070] or "wipe" Bridge Clip AV stream in [0046]*), said Bridge Clip AV stream including enough data to enable continuous playback from a record medium during a time when a playback head jumps from one location on the record medium to another location on the record medium ([0033], [0084], [0106]; Figs. 4), said first AV stream is associated with a first play item and said second AV stream is associated with a second play item, said first and second play items are part of a playlist, and said second play item includes a reference to said clip information for said Bridge Clip AV stream and a reference to a clip information for said second AV stream ([0057]-[0064] - *wherein the editing list corresponding to the recited playlist, in which it specifies how to play back for previewing of the cuts and transitional materials sequentially - referring to Fig. 4G, such an editing list specifies the cuts a, X1, b, X2, and d sequentially. In such an*

example, the first play item comprises the information in the editing list that specifies the cut a to be played first. The second play item is interpreted as the information in the editing list that comprises at least two other pieces of information, one of which specifies to X1 to be played back next to the cut a and the other of which specifies the cut b to be played after the transitional material X1 has been played back. Such a second play item therefore includes a reference to the clip information for the Bridge Clip AV stream, i.e. specifying playback of X1, and a reference to the clip information for said second AV stream, i.e. specifying playback of the cut b itself), said playlist is a file designating a playback sequence for a plurality of AV streams through a plurality of corresponding play items, each of said AV streams corresponding to respective clip information containing information ancillary to said AV stream, and said plurality of play items managing playback of said plurality of AV streams using time information, wherein said time information is used to determine corresponding AV stream address information by referencing said clip information ([0057]-[0064] – wherein the editing list corresponding to the recited playlist, in which it specifies or designates how to play back for previewing of the cuts and transitional materials sequentially – referring to Fig. 4G, such an editing list specifies the cuts a, X1, b, X2, and d sequentially. In such an example, the first play item comprises the information in the editing list that specifies the cut a to be played first. The second play item is interpreted as the information in the editing list that comprises at least two other pieces of information, one of which specifies to X1 to be played back next to the cut a and the other of which specifies the cut b to be played after the transitional material X1 has been played back. Such a

second play item therefore includes a reference to the clip information for the Bridge Clip AV stream, i.e. specifying playback of X1, and a reference to the clip information for said second AV stream, i.e. specifying playback of the cut b itself. The clip information is the information in the editing list that specifies what type of streams a specific cut is ("fade-in", "fade-out", "wipe" vs. unmodified cuts) and/or where the cuts begin and end using time information to determine corresponding AV stream address information in terms of in-points and out-points).

Claim 7 is rejected for the same reason as discussed in claim 1 above.

Claim 8 is rejected for the same reason as discussed in claim 1 above.

Claims 10-12 recite an information processing apparatus, an information processing method, and a non-transitory recording medium having recorded thereon a computer-readable program for processing information, comprising: (1) reproducing or a reproducing unit operable to reproduce a recording medium having recorded thereon a first AV stream, a second AV stream, a Bridge Clip AV stream consisting of preset portions of the first and second AV stream without changes to the portions, and clip information that includes address information pertinent to said Bridge Clip AV stream and clip stream type information for the Bridge Clip AV stream, said Bridge Clip AV stream being reproduced when reproduction is switched from said first AV stream to said second AV stream, including address information on addresses of source packets of the first and the second AV streams; (2) controlling or a controller operable to control said reproducing step or unit for switching reproduction from said first AV stream readout-controlled in a first readout controlling step to said Bridge Clip AV stream and

from said Bridge Clip AV stream to said second AV stream, based on information pertinent to said Bridge Clip AV stream, readout-controlled in a second readout controlling step; wherein said Bridge Clip AV stream maintains continuity to achieve a seamless playback and said clip stream type information included in the clip information for said Bridge Clip AV stream indicates that said third AV stream is a Bridge Clip AV stream, said Bridge Clip AV stream including enough data to enable continuous playback from a record medium during a time when a playback head jumps from one location on the record medium to another location on the record medium, said first AV stream is associated with a first play item and said second AV stream is associated with a second play item, said first and second play items are part of a playlist, and said second play item includes a reference to said clip information for said Bridge Clip AV stream and a reference to a clip information for said second AV stream, said playlist is a file designating a playback sequence for a plurality of AV streams through a plurality of corresponding play items, each of said AV streams corresponding to respective clip information containing information ancillary to said AV stream, and said plurality of play items managing playback of said plurality of AV streams using time information, wherein said time information is used to determine corresponding AV stream address information by referencing said clip information.

Sakai et al. anticipate an information processing apparatus, an information processing method, and a non-transitory recording medium having recorded thereon a computer-readable program for processing information, comprising: (1) reproducing or a reproducing unit operable to reproduce a recording medium having recorded thereon a

Art Unit: 2621

first AV stream, a second AV stream, a Bridge Clip AV stream consisting of preset portions of the first and second AV stream ([0011], Fig. 4A-4G) without changes to the portions ([0097]; [0103]; [0105]), and an editing list ([0071]), which has information to specify the corresponding cuts and transition material ([0057]-[0064]), which is the clip information, including editing points (in-points and out-points) to mark the cuts ([0086]), which are the address information to the first and second AV streams ([0098]). The editing list also includes "transition mode" for each combined AV stream ([0067]; *the "transition mode" is the "clip stream type information"*), said Bridge Clip AV stream being reproduced when reproduction is switched from said first AV stream to said second AV stream, including address information on addresses of source packets of the first and the second AV streams ([0071], [0086], [0098]); (2) controlling or a controller operable to control said reproducing step or unit for switching reproduction from said first AV stream readout-controlled in a first readout controlling step to said Bridge Clip AV stream and from said Bridge Clip AV stream to said second AV stream, based on information pertinent to said Bridge Clip AV stream, readout-controlled in a second readout controlling step ([0093]); wherein said Bridge Clip AV stream maintains continuity to achieve a seamless playback (Fig. 4F; Fig. 4G; *"third AV stream being X1 or X2 maintains continuity of playback of AV streams a, b, and d in Fig. 4G; thus achieve a seamless playback"*) and said clip stream type information included in the clip information for said Bridge Clip AV stream indicates that said third AV stream is a Bridge Clip AV stream (*the "transition mode" indicates type of Bridge Clip AV stream, e.g. "fade-in", "fade-out" Bridge Clip AV stream in [0070] or "wipe" Bridge Clip AV*

stream in [0046]), said Bridge Clip AV stream including enough data to enable continuous playback from a record medium during a time when a playback head jumps from one location on the record medium to another location on the record medium ([0033], [0084], [0106]; Figs. 4), said first AV stream is associated with a first play item and said second AV stream is associated with a second play item, said first and second play items are part of a playlist, and said second play item includes a reference to said clip information for said Bridge Clip AV stream and a reference to a clip information for said second AV stream ([0057]-[0064] – wherein the editing list corresponding to the recited playlist, in which it specifies how to play back for previewing of the cuts and transitional materials sequentially – referring to Fig. 4G, such an editing list specifies the cuts a, X1, b, X2, and d sequentially. In such an example, the first play item comprises the information in the editing list that specifies the cut a to be played first. The second play item is interpreted as the information in the editing list that comprises at least two other pieces of information, one of which specifies to X1 to be played back next to the cut a and the other of which specifies the cut b to be played after the transitional material X1 has been played back. Such a second play item therefore includes a reference to the clip information for the Bridge Clip AV stream, i.e. specifying playback of X1, and a reference to the clip information for said second AV stream, i.e. specifying playback of the cut b itself), said playlist is a file designating a playback sequence for a plurality of AV streams through a plurality of corresponding play items, each of said AV streams corresponding to respective clip information containing information ancillary to said AV stream, and said plurality of play items managing playback of said plurality of

AV streams using time information, wherein said time information is used to determine corresponding AV stream address information by referencing said clip information ([0057]-[0064] – wherein the editing list corresponding to the recited playlist, in which it specifies or designates how to play back for previewing of the cuts and transitional materials sequentially – referring to Fig. 4G, such an editing list specifies the cuts a, X1, b, X2, and d sequentially. In such an example, the first play item comprises the information in the editing list that specifies the cut a to be played first. The second play item is interpreted as the information in the editing list that comprises at least two other pieces of information, one of which specifies to X1 to be played back next to the cut a and the other of which specifies the cut b to be played after the transitional material X1 has been played back. Such a second play item therefore includes a reference to the clip information for the Bridge Clip AV stream, i.e. specifying playback of X1, and a reference to the clip information for said second AV stream, i.e. specifying playback of the cut b itself. The clip information is the information in the editing list that specifies what type of streams a specific cut is ("fade-in", "fade-out", "wipe" vs. unmodified cuts) and/or where the cuts begin and end using time information to determine corresponding AV stream address information in terms of in-points and out-points).

Claim 14 recites a non-transitory recording medium having recorded thereon address information, comprising: (1) a Bridge Clip AV stream consisting of preset portions of the first and second AV streams without changes to the portions and being reproduced when reproduction is switched from said first AV stream to said second AV stream; (2) clip information that includes address information as information pertinent to

said Bridge Clip AV stream and clip stream type information for the Bridge Clip AV stream, said address information including information on addresses of source packets of said first and second AV streams at a time of switching of reproduction from said first AV stream to a third AV stream and from said third AV stream to said second AV stream; wherein said Bridge Clip AV stream maintains continuity to achieve a seamless playback and said clip stream type information included in the clip information for said Bridge Clip AV stream indicates that said third AV stream is a Bridge Clip AV stream, said Bridge Clip AV stream including enough data to enable continuous playback from a record medium during a time when a playback head jumps from one location on the record medium to another location on the record medium, said first AV stream is associated with a first play item and said second AV stream is associated with a second play item, said first and second play items are part of a playlist, and said second play item includes a reference to said clip information for said Bridge Clip AV stream and a reference to a clip information for said second AV stream, said playlist is a file designating a playback sequence for a plurality of AV streams through a plurality of corresponding play items, each of said AV streams corresponding to respective clip information containing information ancillary to said AV stream, and said plurality of play items managing playback of said plurality of AV streams using time information, wherein said time information is used to determine corresponding AV stream address information by referencing said clip information.

Sakai et al. anticipate a non-transitory recording medium having recorded thereon address information, comprising: (1) a Bridge Clip AV stream consisting of

Art Unit: 2621

preset portions of the first and second AV streams without changes to the portions ([0097]; [0103]; [0105]) and being reproduced when reproduction is switched from said first AV stream to said second AV stream ([0011], [0012], Fig. 4A-4G) (2) and an editing list ([0071]), which has information to specify the corresponding cuts and transition material ([0057]-[0064]), which is the clip information, including editing points (in-points and out-points) to mark the cuts ([0086]), which are the address information to the first and second AV streams ([0098]). The editing list also includes "transition mode" for each combined AV stream ([0067]; the "transition mode" is the "clip stream type information"), said address information including information on addresses of source packets of said first and second AV streams at a time of switching of reproduction from said first AV stream a third AV stream and from said third AV stream to said second AV stream ([0071], [0086], [0098], and [0072]); wherein said Bridge Clip AV stream maintains continuity to achieve a seamless playback (Fig. 4F; Fig. 4G; "third AV stream being X1 or X2 maintains continuity of playback of AV streams a, b, and d in Fig. 4G; thus achieve a seamless playback) and said clip stream type information included in the clip information for said Bridge Clip AV stream indicates that said third AV stream is a Bridge Clip AV stream (the "transition mode" indicates type of Bridge Clip AV stream, e.g. "fade-in", "fade-out" Bridge Clip AV stream in [0070] or "wipe" Bridge Clip AV stream in [0046]), said Bridge Clip AV stream including enough data to enable continuous playback from a record medium during a time when a playback head jumps from one location on the record medium to another location on the record medium ([0033], [0084], [0106]; Figs. 4), said first AV stream is associated with a first play item

and said second AV stream is associated with a second play item, said first and second play items are part of a playlist, and said second play item includes a reference to said clip information for said Bridge Clip AV stream and a reference to a clip information for said second AV stream ([0057]-[0064] – wherein the editing list corresponding to the recited playlist, in which it specifies how to play back for previewing of the cuts and transitional materials sequentially – referring to Fig. 4G, such an editing list specifies the cuts a, X1, b, X2, and d sequentially. In such an example, the first play item comprises the information in the editing list that specifies the cut a to be played first. The second play item is interpreted as the information in the editing list that comprises at least two other pieces of information, one of which specifies to X1 to be played back next to the cut a and the other of which specifies the cut b to be played after the transitional material X1 has been played back. Such a second play item therefore includes a reference to the clip information for the Bridge Clip AV stream, i.e. specifying playback of X1, and a reference to the clip information for said second AV stream, i.e. specifying playback of the cut b itself), said playlist is a file designating a playback sequence for a plurality of AV streams through a plurality of corresponding play items, each of said AV streams corresponding to respective clip information containing information ancillary to said AV stream, and said plurality of play items managing playback of said plurality of AV streams using time information, wherein said time information is used to determine corresponding AV stream address information by referencing said clip information ([0057]-[0064] – wherein the editing list corresponding to the recited playlist, in which it specifies or designates how to play back for previewing of the cuts and transitional

materials sequentially – referring to Fig. 4G, such an editing list specifies the cuts a, X1, b, X2, and d sequentially. In such an example, the first play item comprises the information in the editing list that specifies the cut a to be played first. The second play item is interpreted as the information in the editing list that comprises at least two other pieces of information, one of which specifies to X1 to be played back next to the cut a and the other of which specifies the cut b to be played after the transitional material X1 has been played back. Such a second play item therefore includes a reference to the clip information for the Bridge Clip AV stream, i.e. specifying playback of X1, and a reference to the clip information for said second AV stream, i.e. specifying playback of the cut b itself. The clip information is the information in the editing list that specifies what type of streams a specific cut is ("fade-in", "fade-out", "wipe" vs. unmodified cuts) and/or where the cuts begin and end using time information to determine corresponding AV stream address information in terms of in-points and out-points).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai et al. (JP P09-302628 - references herein are made to Sakai et al. - US 2003/0012550, as an English translation) as applied to claims 1, 7-8, 10-12, and 14 above, and further in view of Lenihan et al. (US Patent 6,169,843).

Claim 2 recites the arrival time stamp of the source packet of the first AV stream being continuous with that of a first source packet at the leading end of the third AV stream; and the arrival time stamp of the source packet at the trailing end of the third AV stream being continuous with that of a second source packet of the second AV stream.

Claim 3 recites a sole discontinuous point exists in an arrival time stamp of said second source packet of the third AV stream.

Sakai et al. do not teach arrival time stamp being continuous at link boundary. Sakai et al. also do not teach a sole discontinuous point existing in an arrival time stamp of a source packet of the third AV stream.

Lenihan et al. teach a recording and playback of audio-video transport streams, which in record mode, an arrival time stamp including an arrival time stamp indicating discontinuity within a series of subsequent transport packets (*column 11, lines 44-52*), is generated for each input transport packet to be recorded (*column 9, lines 47-49*). When reproduced, the arrival time stamp value from the immediately following transport packet is then loaded into STC as the current time (*column 11, lines 55-57*).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the method of using arrival time stamps, including the timestamp discontinuity feature, taught by Lenihan et al. into the recording/reproduction apparatus taught by Sakai et al. One of ordinary skill in the art at the time the invention was made would have had a reasonable expectation of combining the use of arrival time stamps, , including the timestamp discontinuity feature, taught by Lenihan et al. and the recording/reproduction apparatus taught by Sakai et al. because, according to

Lenihan et al., it permits transport packets to be delivered to a playback device continuously without requiring alteration in the previously stored ATS values (*column 11, 58-61*).

Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai et al. (JP 11-146330 - references herein are made to Sakai et al. - US 2003/0012550, as an English translation) and Lenihan et al. (US Patent 6,169,843) as applied to claims 1-3, 7-8, 10-12, and 14 above, and further in view of Nakatani et al. (US Patent 6,118,924).

Claims 4-6 recite the addresses are determined so that a data portions of AV streams previous and subsequent to the source packets of the first and second AV streams respectively, and the third AV stream are located in a continuous area of not less than a preset size on a recording medium.

Sakai et al. and Lenihan et al. do not teach the minimum area of continuity on a recording medium.

Nakatani et al. teach the minimum physically continuous extent length required for continuous reproduction of AV data (*column 35, Formula 6, Formula 9, Formula 10; column 36, Formula 12*).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the requirement on minimum physically continuous area for storing AV data taught by Nakatani et al. into the information processing apparatus with continuous arrival time stamps at link boundary taught by Sakai et al. and Lenihan

Art Unit: 2621

et al. because, otherwise, the amount of AV data in the buffer could decrease to zero and continuous reproduction would not be guaranteed (*column 35, lines 1-7*).

Therefore, the invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, absent unexpected results to the contrary.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Q. Dang whose telephone number is (571)270-1116. The examiner can normally be reached on IFT.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, THAI Q. TRAN can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2621

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hung Q Dang/
Examiner, Art Unit 2621

/Thai Tran/
Supervisory Patent Examiner, Art Unit 2621